

Agilent Ref: 10030074-1  
United States Application Serial No. 10/670,554

### **RESPONSE**

In view of the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow Claims 1-15 and 21-25 the only claims pending and currently under examination in this application.

#### **Formal Matters**

Claims 1-15 and 21-25 are pending after entry of the amendments set forth herein

Claims 1-16 were examined. Claims 1-15 were rejected. No claims were allowed.

Claims 16-20 have been cancelled without prejudice.

Claim 1 has been amended. Support for the amendment can be found in the claims as originally filed and throughout the specification at, for example: page 6, lines 4-8.

New claims 21-25 have been added. Support for the new claims can be found in the claims as originally filed and throughout the specification at, for example: claim 21: original claims 1 and 14; claim 22: original claim 2; claim 23: original claim 3; claim 24: original claim 4; and claim 25: original claim 5.

As the above amendments introduce no new matter to the application, their entry is respectfully requested.

#### **Restriction Requirement**

The Applicants hereby confirm the election to prosecute the invention of Group I, claims 1-14, as made on August 9, 2005.

#### **Rejection under 35 U.S.C. §102**

Claims 1-5 and 8 have been rejected under 35 U.S.C. §102 (b) for allegedly being anticipated by Yang et al. (U.S. Patent No. 5,006,421). In view of the amendments to the claims and the remarks made herein, this rejection is respectfully traversed.

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The cited reference is directed to a diaphragm structure comprising two layers including a silicon dioxide layer and a silicon nitride layer, where it is possible to offset the compressive stress exhibited by silicon dioxide and the tensile stress exhibited by silicon nitride to lower the overall stress of the structure.

In making the rejection, the Office Action indicates that in claim 1, the phrase "is sufficiently small to avoid buckling or wrinkling in the first region" is an intended use and therefore given little patentable weight (Office Action, page 3). Moreover, the Office Action further states the following:

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

(Office Action, bridging pages 3 and 4)

The Applicants respectfully disagree. The limitation clearly provides a structural difference between the claimed invention and the prior art. In contrast to the cited reference, the present invention is directed to a structure comprising a rigid frame support and a tensile diaphragm, the diaphragm having a first region and a second region, wherein the first lateral extent of the first region in relation to the first thickness is sufficiently small to avoid buckling or wrinkling of the first region.

However, in the spirit of expediting prosecution and without conceding as to the correctness of the rejection, claim 1 has been amended for clarification to recite "wherein the first lateral extent of the first region and the first thickness have a width to thickness ratio that is sufficiently small to avoid buckling or wrinkling of the first region". The amendment further emphasizes the structural difference between the claimed invention and the prior art.

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As such, the cited reference does not teach each and every limitation found in the claims. In particular, the cited reference fails to teach a structure wherein the first lateral extent of the first region and the first thickness have a width to thickness ratio that is sufficiently small to avoid buckling or wrinkling of the first region.

Therefore, since the cited reference fails to anticipate claims 1-5 and 8, the Applicants respectfully request that this rejection be withdrawn.

**Rejection under 35 U.S.C. §103**

Claims 6-7 and 9-15 have been rejected under 35 U.S.C. §103 as being unpatentable for allegedly being rendered obvious by Yang et al. In view of the remarks made herein this rejection is respectfully traversed.

As noted above, claim 1 has been amended to recite that first lateral extent of the first region and the first thickness have a width to thickness ratio that is sufficiently small to avoid buckling or wrinkling of the first region. The limitation clearly provides a structural difference between the claimed invention and the prior art. As reviewed above, nowhere in Yang et al. is a structure as claimed taught, or even suggested, since the cited reference fails to teach or suggest a width to thickness ratio that is sufficiently small to avoid buckling or wrinkling of the first region

As such, the cited reference does not teach each and every limitation found in the claims. Therefore, since the cited references fail to render claims 6-7 and 9-15 obvious, the Applicants respectfully request that this rejection be withdrawn.

**New Claims 21 to 25**

New claims 21 to 25 have been added. New Claims 21 to 25 are directed to an apparatus for the construction of one of a microscale and nanoscale device as recited in original Claims 1, wherein the first lateral extent of the first region and the first thickness have a width to thickness ratio from about 4 to about 60 (Claim 21); or wherein the nanoscale device is a nanopore (Claim 22); or wherein the first region

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comprises a layer of silicon dioxide (Claim 23); or wherein the second region comprises a composite set of layers (Claim 24), or wherein one of the composite set of layers comprises a layer of silicon nitride (Claim 25). Since, none of the cited references teach or suggest a device comprising such additional elements, new Claims 21 to 25 are patentable in view of the cited references.

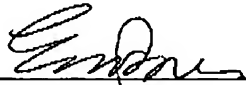
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### CONCLUSION

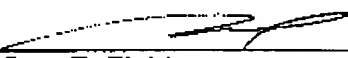
The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078.

Respectfully submitted,

Date: December 16, 2005

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